

**DEPARTMENT OF TRANSPORTATION**

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
690 Walnut Ave. St. 150  
Vallejo, CA 94592-1133  
(707) 649-5453  
(707) 649-5493

Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-001327**Date Inspected:** 23-Jan-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 1800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 700**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:****CWI Present:****Yes No****Inspected CWI report:** **Yes No N/A****Rod Oven in Use:** **Yes No N/A****Electrode to specification:** **Yes No N/A****Weld Procedures Followed:** **Yes No N/A****Qualified Welders:** **Yes No N/A****Verified Joint Fit-up:** **Yes No N/A****Approved Drawings:** **Yes No N/A****Approved WPS:** **Yes No N/A****Delayed / Cancelled:** **Yes No N/A****Bridge No:** 34-0006**Component:** Tower mock up assemblies**Summary of Items Observed:**

The Caltrans Quality Assurance (QA) inspector, Scott Croff, was present at Zhenhua Port Machinery Company, Ltd (ZPMC) to observe the scheduled mock up construction and production construction of the SAS Superstructure.

Bay 2: At the start of the shift, the QA inspector was informed of actions that ZPMC personnel were observed using jacks to assist the alignment of the Upper and Lower 114 meter tower mock up sections. The QA inspector was informed that the use of jacks was not detailed in ZPMC's fabrication plans for the 114 meter tower mock up. The QA inspector was also informed that ZPMC will begin drilling the connection plate bolt holes through the skin plates of the Upper & Lower 114 meter tower mock up sections. The QA inspector was informed that ultrasonic testing (UT) verification should be conducted on all possible locations before the bolt holes are drilled. The QA inspector conducted 10% UT verification of accessible skin plate joints on the Lower 114 meter assembly.

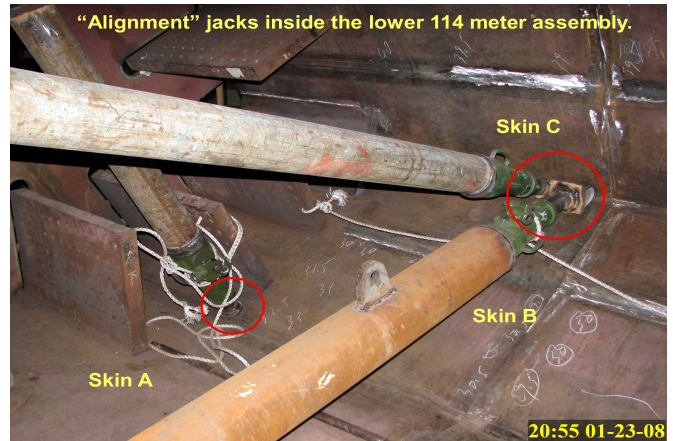
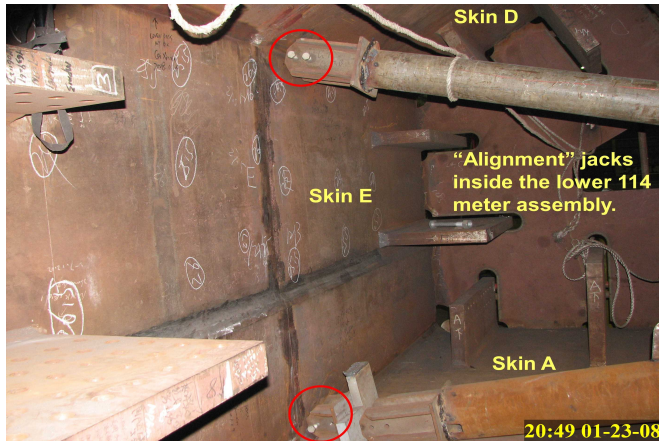
The QA inspector noted that the jacks that are being used for as alignment aids are placed against opposing welds of the pentagon shape of the assembly and are being held in place by force. The QA inspector is not aware of how much force is being applied with the jacks and the QA inspector is not aware of the condition of the contact surfaces under the jacks. At the time of the QA inspector's 10% UT verification, joints MWT-70, MWT-71 & MWT-73 appeared to be conforming to the requirements of AWS D1.5 2002 Table 6.3. See the attached photos of the jacks in place inside the Lower 114 meter tower mock up assembly.

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## Summary of Conversations:

The QA inspector Scott Croff notified the QA inspectors Robert Cuellar, Alfredo Acuna and James Cochran of the observed UT verification. The QA inspector Scott Croff noted that indications were observed during UT verification and the QA inspector has general concerns with the geometry of the designed weld joint and the methods of UT that are being used. The QA inspector Scott Croff then commented that the above described joints appear to be generally conforming to the contract requirements at the time of examination. There were no other notable conversations during this shift.

## Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Croff, Scott	Quality Assurance Inspector
<b>Reviewed By:</b>	Cuellar, Robert	QA Reviewer

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